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silicone rubber, nitrile rubber, fluorine rubber, urethane rubber, and hydrogenated products thereof.--

--10. The thermoplastic elastomer composition according to claim 1, wherein the component (C) is not vulcanized.--

REMARKS

Claims 1-10 are pending and stand ready for further action on the merits. The specification has been amended for clarity. Support for new claim 9 can be found in the paragraph bridging pages 27-28. Support for new claim 10 can be found on page 27, last line. No new matter has been added by way of the above-amendment.

Issues Under 35 U.S.C. §102(b) or 103(a)

Claims 1-6 and 8 are rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Hasegawa et al., U.S. 5,550,190. Applicants respectfully traverse the rejection.

Hasegawa et al. disclose a thermoplastic elastomer composition including its constituting components (A) and (B), the blending ratio thereof, and a reaction process for its preparation. Specifically, as can be seen from the Abstract and claims, Hasegawa et al.'s teachings are directed to a thermoplastic elastomer composition obtained by dynamically

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crosslinking a thermoplastic polyester elastomer (A) and a rubber (B) during kneading.

In column 5, lines 23-25, Hasegawa et al. teach:

The olefin rubbers [(B)] include ethylene-propylene copolymer and ethylene-propylenediene terpolymer rubbers.

Futhermore, Hasegawa et al. teach in col. 6, lines 14-16 that:

the gel content of the rubber (B) is preferably 50% by weight or more, more preferably 70% by weight or more.

From this description, the skilled artisan would reasonably conclude that it is essentially required that component (B) of Hasegawa et al. is crosslinked.

In contrast, component (C) in the present invention is an olefin-based or styrene-based thermoplastic elastomer. This component is used without vulcanization, and generally has a gel content of 10% or less, see especially inventive claims 9 and 10.

Applicants respectfully submit that the presently claimed elastomer composition is neither anticipated nor rendered obvious by Hasegawa et al., since Hasegawa et al. fail to teach or suggest using olefin-based or styrene based thermoplastic elastomers that are not crosslinked. As the MPEP directs, all the claim limitations must be taught or suggested by the prior art to

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establish a *prima facie* case of anticipation or obviousness. See MPEP §§ 2131 and 2143.03.

Accordingly, withdrawal of the rejection is respectfully requested.

Patentable Distinctions Between Inventive Claim 2 and Hasegawa et al.:

Inventive claim 2 recites that the modified olefinic resin of Component (B) is an olefinic resin copolymerized or grafted with glycidyl methacrylate. In finding this claim obvious, the Examiner appears to be using the teachings of Hasegawa et al at column 7, lines 37-52 and Example 9.

As a specific example of the compatibilizer, Example 9 of Hasegawa et al. is a system containing a compatibilizer (the composition of Example 9 is polyester elastomer/ nitrile rubber (NBR)/ compatibilizer (MODIPER 4400, manufactured by Nippon Oils and Fats Co., Ltd.)/ crosslinking agent (Kayahexa AD, manufactured by Kayaku Akuzo Corporation)). However, the rubber used in Example 9 is a vulcanized rubber, and is different from the present invention. Furthermore, Hasegawa et al. fail to provide a specific description concerning the concentration of the compatibilizer in the composition.

Accordingly, significant patentable distinctions exist between present claim 2 and the teachings of Hasegawa et al.

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Patentable Distinction Between Inventive Claim 8 and Hasegawa et al.:

In Hasegawa et al., the average particle diameter of component (B) mixed and dispersed in component (A) and the calculation method therefor are disclosed. Applicants respectfully submit that Hasegawa et al. neither anticipates nor renders obvious the inventive elastomer of claim 8, which recites a specific particle diameter, since Hasegawa et al. fail to teach or suggest the combination of the inventive particle diameter and that the particle composition is not crosslinked (vulcanized).

Generally, in the case where vulcanization is conducted, the dispersed particle diameter of the rubber is affected by vulcanization. Specifically, vulcanization increases the rubber viscosity, thereby making the rubber more susceptible to shear force. As a result, the particle diameter of the rubber in such a vulcanized system tends to be smaller than that in the system where vulcanization is not conducted.

In the system where vulcanization is not conducted, as in the present invention, it had been difficult to reduce the dispersed particle diameter and obtain satisfactory physical properties. Hasegawa et al. do not provide any specific disclosure about a compatibilizer and the addition amount thereof, which are suitable for the system that does not necessitate vulcanization. The present invention makes it possible to control the dispersed particle diameter within the range as claimed by using a specific

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compatibilizer in a specific amount.

Accordingly, significant patentable distinctions exist between present claim 8 and the teachings of Hasegawa et al.

Claim Objections

Applicants note with appreciation that the Examiner has indicated claim 7 has been objected to for being dependent upon a rejected base claim, but contains allowable subject matter.

Conclusion

In view of the above amendments and comments, Applicants respectfully submit that the claims are in condition for allowance. A notice to such effect is earnestly solicited.

Applicants have attached hereto a marked up version of the claims to show the changes made for the Examiner's convenience.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), the Applicants hereby petition for an extension of one (1) month to June 26, 2002 in which to file a reply to the Office Action. **The Commissioner is hereby authorized to charge the \$110.00 extension of time fee to Deposit Account No. 02-2448.**

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02 2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17;


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particularly, extension of time fees.

If the Examiner has any questions concerning this application, he is requested to contact Garth M. Dahlen, Ph.D. (#43,575) at the offices of Birch, Stewart, Kolasch & Birch, LLP.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made

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VERSION WITH MARKINGS TO SHOW CHANGES MADEIN THE SPECIFICATION:

The specification has been amended as follows:

The first paragraph on page 3 has been amended as follows:

-- The present invention was made to solve the above-described problems [in] associated with conventional techniques.--

The second paragraph on page 3 has been amended as follows:

-- Accordingly, an object of the invention is to provide a thermoplastic elastomer excellent in flexibility, weatherability, heat resistance, oil resistance, properties at [a] low temperatures, strength and fabrication [property] properties.--

The fourth paragraph beginning on page 3 has been amended as follows:

-- The above-described objects of the present invention have been achieved by providing a thermoplastic elastomer composition comprising the following components (A), (B) and (C):

(A) 100 parts by weight of a thermoplastic polyester elastomer;

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(B) 3 to 100 parts by weight of a modified olefin resin having an epoxy group or a derivative group thereof in its molecule; and

(C) 10 to 900 parts by weight of a rubbery elastomer selected from the group consisting of an olefin-based thermoplastic [elastomers] elastomer(s) and styrene-based thermoplastic [elastomers] elastomer(s).—

The paragraph beginning on page 8, line 23 and ending on page 9, line 2 has been amended as follows:

--Component (c) which forms the low melting point soft segment, namely, the polyether glycol, which constitutes a long chain polyester, comprises unit T, has alcoholic hydroxyl [hydroxyl] groups at both terminals and has a number-average molecular weight of 400 to 6,000.--

The paragraph on page 21, lines 5-18 has been amended as follows:

--The polyether glycol for substitution preferably has a molecular weight distribution (Mv/Mn) of 1.6 or less, more preferably, 1.3 or less, i.e., narrow molecular weight

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distribution. Preferably, the polyether glycol for substitution is used in an amount of 90% by weight or less of the polyether glycol used in the present invention. If this value exceeds 90% by weight, generally, physical properties such as water resistance and properties at [a] low [temperature] temperatures sometimes cannot be obtained at a satisfactory level[, although]. Although such physical properties may be affected by a content of neopentyloxy units in the polyether glycol used in the present invention, [and,] therefore, the amount of the polyether glycol must be determined corresponding to [an object of] the intended use.--

The paragraph on page 27, line 15 to page 28, line 20 has been amended as follows:

-- As the rubbery elastomer of component (C) of the present invention, mention may be made of olefinic elastomers, e.g., ethylene- α -olefin copolymers (the ratio of α -olefin is 20% by weight or more) such as ethylene-propylene copolymer, ethylene-propylene-5-ethylidene norbornene copolymer, ethylene-propylene-5-methyl norbornene copolymer, ethylene-propylene-dicyclopentadiene copolymer, ethylene-butene copolymer and ethylene-octene copolymer, and compositions of these elastomers

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and the above-described olefinic resins (including dynamic [vulcanizates);] vulcanizates); and styrene based elastomers such as styrene-butadiene block copolymer, styrene-isoprene block copolymer and the hydrogenated products thereof. Further, as a rubbery elastomer of component (C) of the present invention, also can be used diene-based elastomers such as polybutadiene, polyisoprene and random copolymers of polybutadiene and polystyrene, and hydrogenated products thereof; natural rubber; gum balata; acryl rubber; chloroprene rubber; silicone rubber; nitrile rubber; fluorine rubber; and urethane rubber. Among these elastomers, particularly, olefin-based elastomers and styrene based elastomers are preferred because of being able to provide an elastomer composition having excellent moldability, rubber elasticity and scratch resistance. Particularly preferably, when an olefinic elastomer of an ethylene- α -olefin copolymer having 20% by weight or more of an α olefin, and a styrene-based elastomer obtained by hydrogenating a styrene-diene block copolymer are used as component (C) of the present invention, can be obtained a thermoplastic composition having further excellent strength and oil resistance.-

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The paragraph on page 29, line 12 to page 30, line 7 has been amended as follows:

--Further, a plasticizer can be added as needed to the [elasomer] elastomer composition of the present invention. Examples of such a plasticizer include phthalates such as dioctyl phthalate, dibutyl phthalate, diethyl phthalate, butyl benzyl phthalate, di-2-ethylhexyl phthalate, diisodecyl phthalate, diundecyl phthalate and diisononyl phthalate; phosphates such as tricresyl phosphate, triethyl phosphate, tributyl phosphate, tri-2-ethylhexyl phosphate, [trimethylhexyl] trimethylhexyl phosphate, tris-chloroethyl phosphate and [tris-dichloropropyl] tris-dichloropropyl phosphate; aliphatic esters such as octyl trimellitate, isodecyl trimellitate, trimellitates, dipentaerythritol esters, dioctyl adipate, dimethyl adipate, di-2-ethylhexyl azelate, dioctyl azelate, dioctyl sebacate, di-2-ethylhexyl sebacate and methylacetyl ricinocate; pyromellitates such as octyl pyromellitate; epoxy plasticizers such as epoxidized soybean oil, epoxidized linseed oil and epoxidized aliphatic alkyl esters; polyether plasticizers such as adipic acid ether ester and polyether; liquid rubber such as [liquid] liquid NBR, liquid acrylic rubber and liquid polybutadiene; and non-aromatic paraffinic oils.--

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IN THE CLAIMS:

Claims 9 and 10 have been added.